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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/480,013	01/10/2000	SHARAT SUBRAMANIYAM CHANDER	CHANDER6-5	3803

7590

08/25/2004

Walter W Duft
LAW OFFICES OF WALTER W. DUFT
10255 MAIN STREET
SUITE 10
CLARENCE, NY 14031

EXAMINER

CRAYER, CHARLES R

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/480,013

Applicant(s)

CHANDER ET AL.

Examiner

Charles R Craver

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 7-14, 17-24, 27-34 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross, of record.

Claims 1, 7, 8, 21, 27 and 28: Hansson discloses a method for providing SMS (teleservice) messaging to mobile stations (10a et al) in a wireless network (8, col 3 line 55-col 4 line 21), comprising, at a network sending entity (SMSC 13), utilizing an indication of the maximum teleservice payload size that can be sent by the sending entity to the mobile stations (col 3 lines 1-11, col 4 lines 22-35) via network receiving entities (MSC) serving said mobile station (col 4 lines 36-62) to format the size of teleservice messages sent by the sending entity to the mobile station via said receiving entities (col 3 lines 11-14, col 4 lines 22-35, col 6 line 42-col 7 line 13).

Hansson fails to disclose that the network sending entity receives said indication (i.e. it is provided to it), implying that the indication is created or calculated at another site.

Hult discloses an analogous invention, that is, a cellular system (FIG 1) wherein a switching center (30) may utilize a calculation (thus being utilizable) to determine a maximum size of a teleservice message (col 2 lines 38-65) based on an indication received from another entity in the system (col 3 lines 2-13 and line 56-col 4 line 13). The purpose of this is to allow the indication to be tailored to the system (col 1 lines 50-57); which improves bandwidth usage (col 2 lines 7-13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hansson by the teachings of Hult. Hansson discloses that bandwidth is an important commodity in a messaging cellular system, and that a maximum size for messages should be used to keep message traffic from overloading the system (col 1 lines 50-59). One of ordinary skill in the art would thus have been motivated to add Hult to Hansson by the teachings of Hult, where it is stated that providing a maximum SMS message size indication from the cellular network itself allows better messaging system control (col 1 lines 50-57, col 2 lines 7-10).

While Hult further discloses an HLR database (32) which is associated with the mobile stations since it stores information regarding said stations, Hansson in view of Hult is silent on the use of said database for routing the indication to the message center sending entity, or sending the indication as a parameter in a standard registration message either to database or to the MC. Hult does disclose that the message may

be routed to the appropriate MSC by first utilizing the HLR of the network to find said appropriate MSC (col 4 line 66-col 5 line 31).

Ross discloses an analogous art, that is, a cellular messaging system (FIG 2) using a sending entity (50) connected to an HLR (52), which further utilizes a database which may contain data regarding the maximum message size for a particular MSC (col 10 lines 16-65). This allows the MC to get the data more directly, rather than go through the extra steps of finding the particular MSC and contacting it only to find that the message must be returned to the MC to be reformatted. Thus it would have been obvious to one of ordinary skill in the art to use a database such as that suggested by Ross in the method of Hansson in view of Hult, to send the indication information to the SMSC, as it would avoid the aforementioned extra steps. Further, one of ordinary skill in the art would also have recognized that by utilizing the HLR for storing said data, which already contains large amounts of network data, this step could be performed with less steps and save time and network usage, as the MC would have to interrogate the HLR anyway in order to determine the MSC and thus it's corresponding payload (Ross col 5 lines 44-58).

Lastly, since there would be an inherent message exchange between the MSC and the database, and the database and the MC, prior to having the indication at the MC, such is read as a standard registration message parameter by the examiner. As such, the combined invention of Hansson in view of Hult and Ross would inherently utilize such a message parameter to communicate the indication from the MSC to the HLR and then to the MC.

Claims 2 and 22: the combined invention of Hansson, Hult and Ross discloses an SMSC which receives an indication, as shown above, and Hult further discloses that the indication measurement system (40) is connected to the receiving entity (col 5 lines 46-51, FIG 1), one of ordinary skill in the art would understand the need to use the MSC to send the indication to the SMSC via the means connected to it, i.e. said MSC.

Claims 3, 4, 23 and 24: as stated above regarding claim 2, the indication would be sent by the MSC, which is read as a switch.

Claims 11, 17, 18, 31, 37 and 38: Hansson discloses a system for providing SMS (teleservice) messaging to mobile stations (10a et al) in a wireless network (8, col 3 line 55-col 4 line 21), comprising, at a network sending entity (SMSC 13), means for utilizing an indication (thus being utilizable) of the maximum teleservice payload size that can be sent by the sending entity to the mobile stations (col 3 lines 1-11, col 4 lines 22-35) via network receiving entities (MSC) serving said mobile station (col 4 lines 36-62) to format the size of teleservice messages sent by the sending entity to the mobile station via said receiving entities (col 3 lines 11-14, col 4 lines 22-35, col 6 line 42-col 7 line 13).

Hansson fails to disclose that the network sending entity receives said indication, implying that the indication is created or calculated at another site.

Hult discloses an analogous invention, that is, a cellular system (FIG 1) wherein a switching center (30) may utilize a calculation to determine a maximum size of a teleservice message (col 2 lines 38-65) based on an indication received from another entity in the system (col 3 lines 2-13 and line 56-col 4 line 13). The purpose of this is to

allow the indication to be tailored to the system (col 1 lines 50-57), which improves bandwidth usage (col 2 lines 7-13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hansson by the teachings of Hult. Hansson discloses that bandwidth is an important commodity in a messaging cellular system, and that a maximum size for messages should be used to keep message traffic from overloading the system (col 1 lines 50-59). One of ordinary skill in the art would thus have been motivated to add Hult to Hansson by the teachings of Hult, where it is stated that providing a maximum SMS message size indication from the cellular network itself allows better messaging system control (col 1 lines 50-57, col 2 lines 7-10).

While Hult further discloses an HLR database (32) which is associated with the mobile stations since it stores information regarding said stations, Hansson in view of Hult is silent on the use of said database for routing the indication to the message center sending entity, or sending the indication as a parameter in a standard registration message either to database or to the MC. Hult does disclose that the message may be routed to the appropriate MSC by first utilizing the HLR of the network to find said appropriate MSC (col 4 line 66-col 5 line 31).

Ross discloses an analogous art, that is, a cellular messaging system (FIG 2) using a sending entity (50) connected to an HLR (52), which further utilizes a database which may contain data regarding the maximum message size for a particular MSC (col 10 lines 16-65). This allows the MC to get the data more directly, rather than go through the extra steps of finding the particular MSC and contacting it only to find that

the message must be returned to the MC to be reformatted. Thus it would have been obvious to one of ordinary skill in the art to use a database such as that suggested by Ross in the method of Hansson in view of Hult, to send the indication information to the SMSC, as it would avoid the aforementioned extra steps. Further, one of ordinary skill in the art would also have recognized that by utilizing the HLR for storing said data, which already contains large amounts of network data, this step could be performed with less steps and save time and network usage, as the MC would have to interrogate the HLR anyway in order to determine the MSC and thus it's corresponding payload (Ross col 5 lines 44-58).

Lastly, since there would be an inherent message exchange between the MSC and the database, and the database and the MC, prior to having the indication at the MC, such is read as a standard registration message parameter by the examiner. As such, the combined invention of Hansson in view of Hult and Ross would inherently utilize such a message parameter to communicate the indication from the MSC to the HLR and then to the MC.

Claims 12 and 32: the combined invention of Hansson, Hult and Ross discloses an SMSC which receives an indication, as shown above, and Hult further discloses that the indication measurement system (40) is connected to the receiving entity (col 5 lines 46-51, FIG 1), one of ordinary skill in the art would understand the need to use the MSC to send the indication to the SMSC via the means connected to it, i.e. said MSC.

Claims 13, 14, 33 and 34: as stated above regarding claim 2, the indication would be sent by the MSC, which is read as a switch.

Claims 9, 10, 19, 20, 29, 30, 39 and 40: particular message formats such as an AOIA, direct feature request or location request, SMS notification and the like were notoriously well-known in the art at the time of the invention, and as such the examiner takes Official Notice of such a feature, asserting that since Hansson in view of Hult and Ross disclose a standard authentication message technique, the choice of which type of message would be a routine decision based on network connection and architecture and thus would have been obvious to one of ordinary skill in the art at the time of the invention, especially given the previous recitation in the combined invention of an SMSC.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross as applied to claim 3 above, and further in view of Farris, of record.

While disclosing applicant's invention of claim 3 as shown above, Hansson in view of Hult and Ross fails to disclose that the switch may be an MDIS.

Farris discloses, in an analogous art, that is a mobile communications messaging system (FIG 3, col 11 line 49-col 12 line 41) that in a CDPD messaging system a switch (1003) serving base stations (1001) like the MSC of Hansson in view of Hult may have the properties of an MDIS (col 12 line 41-col 13 line 24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hansson in view of Hult and Ross to use the functions of an MDIS in the switch. This would have been motivated by the teachings of Farris,

where it is stated that the MDIS allows CDPD messaging in the system (col 12 lines 57-67), thus said modification would allow Hansson in view of Hult and Ross to operate with CDPD, a popular messaging system.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross as applied to claim 3 above, and further in view of Einola, of record.

While disclosing applicant's invention of claim 3 as shown above, Hansson in view of Hult and Ross fails to disclose that the switch may be a SGSN.

Einola discloses, in an analogous art, that is a mobile communications messaging system (FIG 1, col 4 lines 30-62) that in a GSM messaging system using GPRS a switch (4) serving base stations (3) like the MSC of Hansson in view of Hult may have the properties of a SGSN (col 9 line 66-col 10 line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hansson in view of Hult and Ross to use the functions of a SGSN in the switch. This would have been motivated by the teachings of Einola, where it is stated that the SGSN allows messaging in future GSM system, thus said modification would allow Hansson in view of Hult and Ross to operate using GSM, a popular cellular system.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross as applied to claim 13 above, and further in view of Farris.

Regarding claim 15, which is dependent upon claim 13, please see the rejection of method claim 5 above, which corresponds to system claim 15.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross as applied to claim 13 above, and further in view of Einola.

Regarding claim 16, which is dependent upon claim 13, please see the rejection of method claim 6 above, which corresponds to system claim 16.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross as applied to claim 23 above, and further in view of Farris.

Regarding claim 25, which is dependent upon claim 23, please see the rejection of method claim 5 above.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross as applied to claim 23 above, and further in view of Einola.

Regarding claim 26, which is dependent upon claim 23, please see the rejection of method claim 6 above.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross as applied to claim 33 above, and further in view of Farris.

Regarding claim 35, which is dependent upon claim 33, please see the rejection of method claim 5 above, which corresponds to system claim 35.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross as applied to claim 33 above, and further in view of Einola.

Regarding claim 36, which is dependent upon claim 33, please see the rejection of method claim 6 above, which corresponds to system claim 36.

Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson in view of Hult and Ross.

Hansson discloses a method for providing SMS (teleservice) messaging to mobile stations (10a et al) in a wireless network (8, col 3 line 55-col 4 line 21), comprising, at a network sending entity (SMSC 13), utilizing an indication of the maximum teleservice payload size that can be sent by the sending entity to the mobile stations (col 3 lines 1-11, col 4 lines 22-35) via network receiving entities (MSC) serving said mobile station (col 4 lines 36-62) to format the size of teleservice messages sent by the sending entity to the mobile station via said receiving entities (col 3 lines 11-14, col 4 lines 22-35, col 6 line 42-col 7 line 13).

Hansson fails to disclose that the network sending entity receives said indication (i.e. it is provided to it), implying that the indication is created or calculated at another site, or the use of a database for routing the indication to the message center sending entity, or sending the indication as a parameter in a standard registration message either to to database or to the MC.

Hult discloses an analogous invention, that is, a cellular system (FIG 1) wherein a switching center (30) may utilize a calculation (thus being utilizable) to determine a maximum size of a teleservice message (col 2 lines 38-65) based on an indication received from another entity in the system (col 3 lines 2-13 and line 56-col 4 line 13).

The purpose of this is to allow the indication to be tailored to the system (col 1 lines 50-57), which improves bandwidth usage (col 2 lines 7-13). Also, Hult further discloses an HLR database (32) which is associated with the mobile stations, which stores information regarding said stations, and that the message may be routed to the appropriate MSC by first utilizing the HLR of the network to find said appropriate MSC (col 4 line 66-col 5 line 31).

Ross discloses an analogous art, that is, a cellular messaging system (FIG 2) using a sending entity (50) connected to an HLR (52), which further utilizes a database which may contain data regarding the maximum message size for a particular MSC (col 10 lines 16-65). This allows the MC to get the data more directly, rather than go through the extra steps of finding the particular MSC and contacting it only to find that the message must be returned to the MC to be reformatted.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hansson by the teachings of Hult and Ross. Hansson discloses that bandwidth is an important commodity in a messaging cellular system, and that a maximum size for messages should be used to keep message traffic from overloading the system (col 1 lines 50-59). One of ordinary skill in the art would thus have been motivated to add Hult to Hansson by the teachings of Hult, where it is stated that providing a maximum SMS message size indication from the cellular network itself allows better messaging system control (col 1 lines 50-57, col 2 lines 7-10), as well as Ross, so as to send the indication information to the SMSC, as it would avoid the aforementioned extra steps.

Further, one of ordinary skill in the art would also have recognized that by utilizing the HLR for storing said data, which already contains large amounts of network data, this step could be performed with less steps and save time and network usage, as the MC would have to interrogate the HLR anyway in order to determine the MSC and thus it's corresponding payload (Ross col 5 lines 44-58). Lastly, since there would be an inherent message exchange between the MSC and the database, and the database and the MC, prior to having the indication at the MC, such is read as a standard registration message parameter by the examiner. As such, the combined invention of Hansson in view of Hult and Ross would inherently utilize such a message parameter to communicate the indication from the MSC to the HLR and then to the MC.

Response to Arguments

Applicant's arguments filed 6-30-03 have been fully considered but they are not persuasive.

The examiner respectfully disagrees with Applicant's assertion that Hansson in view of Hult and Ross fails to render obvious the instant invention of e.g. amended claim 1. As to the provision of the teleservice payload size to the entity directly serving the MS, Hult suggests such a system as improving bandwidth usage; the use of messaging from a database to said entity is taught by Ross with an emphasis on eliminating extra steps in the messaging system. As such, the combined invention contemplates an automatic payload system where the indication of payload is received at the serving entity from another portion of the network, and standard messages are

used to convey the data; such would be an obvious combination, given the scope of standard messaging at the time of the invention in the art, and the small amount of data used to convey said payload size.

Conclusion

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 for both formal and informal/draft communications, labeled as such.

Hand delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington VA, sixth floor (receptionist).

Any inquiry concerning this or earlier communications from the examiner should be directed to examiner Charles Craver at (703) 305-3965.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vivian Chin, can be reached at (703) 308-6739.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at (703) 305-4700.

CC

C.Craver

August 23, 2004


CHARLES CRAVER
PATENT EXAMINER